



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <b>(51) International Patent Classification <sup>6</sup> :</b><br><b>A61H 7/00, A47K 7/00, 7/02, A46B 15/00, 17/02</b>   | <b>A1</b> | <b>(11) International Publication Number:</b> <b>WO 95/27469</b><br><b>(43) International Publication Date:</b> 19 October 1995 (19.10.95)  |
| <b>(21) International Application Number:</b> PCT/SG95/00004<br><b>(22) International Filing Date:</b> 6 April 1995 (06.04.95)<br><b>(30) Priority Data:</b><br>PI 9400836      7 April 1994 (07.04.94)      MY<br><b>(71) Applicant (for all designated States except US):</b> TOH, Yok, Soo [SG/SG]; Block 204, Jurong East Street 21, #05-253, Singapore 2260 (SG).<br><b>(71)(72) Applicant and Inventor:</b> TOH, Hon, Leong [MY/MY]; P.O. Box 35, 71000 Port Dickson, Negeri Sembilan (MY).<br><b>(74) Agent:</b> KANDIAH, P.; Toa Payoh Central, P.O. Box 300, Singapore 9131 (SG).   |           | <b>(81) Designated States:</b> AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).<br><br><b>Published</b><br><i>With international search report.</i> |
| <b>(54) Title:</b> ADJUSTABLE BACK SCRUBBER CUM MASSAGER   |           |   |
| <b>(57) Abstract</b>   |           |   |
| <p>A back scrubber cum massager device adopted to be removably secured to a vertical surface (15). The device includes a base member (10) of elastomeric material with a plurality of suction type securing devices (11). The devices are affixed to the hind side of the base member. The device also includes a removably fitted scrubber element (12) to cover the front of the base member. The device is used in bathrooms as a bathroom accessory. Various types of scrubber elements are disclosed.</p> <div style="text-align: right; margin-right: 100px;"> </div> <p style="text-align: center;">VERTICAL CROSS-SECTIONAL VIEW</p> |           |   |

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### ADJUSTABLE BACK SCRUBBER CUM MASSAGER

In this modern age, we still do not have an effective and efficient means to clean, scrub and massage our backs. It is difficult for a person to reach the area between the shoulder blades and other portions of the back with his or her hands. Brushes with long handles and long straps for drawing back-and-forth are available but they can only treat a small area at the time and requires certain amount of skill. Various back scrubbers have been patented before. Examples include US Patent numbers 3791746, 3875604, 4020519, 4053960, 4704756, 4817227, 5105484, 5179755. These devices suffer from one or a combinations of the following disadvantages:- not adjustable; not portable or movable; rigidity of supporting plate; fixed scrubbing element that is not interchangeable; no massaging effect; and poor sanitary maintenance.

### OBJECTIVE OF INVENTION

Against the foregoing background, it is the object of this invention to provide scrubbing cum massaging device that is easily adjustable and mounted in a desired position on a vertical wall or rigid support to suit persons of various heights. It is another object of the invention to provide a scrubber cum massager device that is easily portable and movable from place to place. Yet another object of the invention to provide a scrubber cum massager device that has a soft non-absorbent base member or plate so that it can yield and conform easily to the average human back and at the same time do not absorb water and dirt like a sponge.

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Still yet another object of the invention to provide scrubber cum massager device that has a scrubber element easily removed for washing and fixed back for use. It is another object of the invention to provide a scrubber cum massager device that massages the back simultaneous to the scrubbing action.

#### DESCRIPTIONS OF THE PREFERRED EMBODIMENTS

Figure 1 shows a vertical cross sectional view of the device mounted onto a wall surface.

Figure 2a, 2b, and 2c show horizontal sectional views of the main embodiments of the device shown in Fig 1.

Figure 3 shows a rear plan view of the device shown in Fig 1.

Figure 4a shows a front view of the device with a scrubber element amounted thereon.

Figure 4b shows a front view of the base member without a scrubber element.

Figure 4c shows a side sectional view of a base member.

Figure 5 shows a back view of a scrubber element.

Figure 6 shows a side view of the device in use.

Figure 7 shows perspective view of another embodiment of the device.

Figure 8 shows a sectional view along line A-A in Fig 7.

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With references to Figures 1 to 6, the adjustable back scrubber cum massager device comprises of a base member 10 of rubber or plastic that is soft and non-absorbent. A suitable and preferred material is ethylene vinyl acetate (EVA). The softness, besides providing comfort, also malleably yields to pressure and conforms to the contours of the human back when the user's back presses the base member against a rigid support such as a wall 15 shown in Fig 6. The base member may have thickness of 0.5 to 4.5 cm and length and breadth to suit the average human back. The rear of the base member 13 is flat whereas the front of the said member 14 could be flat or convex. The non-absorbent base member enables easy sanitary maintenance as it do not absorb water or dirt like a sponge. The base member 10 could be rectangular, square, oval or any other shape.

To the back portion 13 of the base member is affixed a plurality of elastic suction cups 11 that are removably secured to a rigid support such as a bath or shower wall 15. Such suction devices 11 permit easy adjustability to suit the height of an individual. In addition, such suction device makes the scrubber highly portable as it could be affixed to any flat surface anywhere without the necessity of other fixtures or parts. Rotation is also made possible and the scrubber cum massager device could be affixed to the wall vertically, horizontally or at an angle.

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Fig 2 shows two embodiments of the horizontal cross-sectional view. In one embodiment, the front surface 14 is flat and in another embodiment, the said surface 14 in cross-sectional view along the longitudinal central axis of the device is convex.

The convex curvature enables the device to scrub the "sunken" portions of our backs more effectively and efficiently. The convex curvature is attained by either making the base member 10 gradually thicker towards the vertical central longitudinal axis from the sides of the base member 10. (Fig. 2b) or making the electric sunken gradually longer as they approach the vertical central axis from the sides of the base member 10 (Fig. 2c).

Fig 3 shows the rear plan view of the base member 10. A plurality of suction devices 11 is affixed to the rear portion 13 of the base member 10. In one embodiment, such suction device comprises of a rubber or soft plastic mat 20 that has a number of elastic suction cups 11. In another embodiment, elastic cups are affixed individually to the base member 10.

In the embodiment shown in Fig 3, either the male or female part of a strip of Velcro 16 is adhered to the edges of the rear portion 13 of the base member 10 ("Velcro" is a trademark).

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The Velcro strip 16 enables the scrubber element to be stretched easily and tightly over the front 14 of the base member 10. It also permits easy removal for washing and sanitary reasons. In other embodiments, the Velcro strip could be affixed to the sides 17 or edges of the front surface 18 of the base member 10.

Fig. 4a. shows the front surface 14 of the base member 10 with the front surface of the scrubber element 12a. The scrubber element could be a towel, wash cloth or any textile fabric or fibre that serves to scrub and clean our skin. Such scrubber element is stretch over the front portion 14 of the base member 10.

Fig 4b shows the front 14 of the base member 10 without the scrubber element. The front surface is of such design and texture that it is slightly abrasive and provides a massaging effect. The surfaces consists of ridges or protuberances 21 with grooves 22 in between, the surface designs of which could be regular or irregular. The ridges, protuberances or designs on the surface are such that the device could be used with or without a scrubber element. However, for the device to be used without the scrubber element, it is preferred that the grooves are made deeper and wider to enhance the scrubbing and massaging effect.

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Fig 4c shows a cross-sectional view of the front portion 14. The embodiment shown consists of regular ridges 21 and grooves 22. Other designs and embodiments such as a "scratchy" surface are possible.

Fig 5 shows the back view of the scrubber element 12b. Four strips Velcro 16a are attached at the edges of the scrubber element. When stretched over the front portion 14 of the base member 10, the attached Velcro strip 16a would mate with the Velcro affixed 16 at the back portion 13 of the base member 10. In other embodiments, the scrubber element could also be removably secured in place by means of elastic bands, zip or end-pockets.

Fig 7 shows another embodiment of a scrubber and massaging device. In this embodiment the scrubber element (20) is of elastomeric material with an abrasive exposed surface. The scrubber element is preferably glued onto the upper surface of the base member. To provide a convex surface of the scrubber element, suitable filler material (22) can be placed between the base member and scrubber element(Fig 8). Alternatively the base member or the scrubber element can be configured to provide the convex shape.

Fig 6 shows the adjustable scrubber cum massager in use. Water is first sprayed on the scrubber element 12 and then soap or body shampoo is applied.



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The user should wet his or her back and then lean back on the device. Moving the back in an up-and down or side-to-side motion enables scrubbing and massaging to be effected simultaneously over a wide area of the user's back. Usage is similar for designs and embodiments that do not use the scrubber element.

Although the invention has been described by references to some embodiments, it is not intended that the adjustable scrubber cum massager be limited thereby, but that certain modifications thereof are intended to be included as falling within the broad spirit and scope of the foregoing disclosure and the appended claims.

CLAIMS

1. A back scrubber cum massager device adapted to be removably secured to a vertical surface, said device comprising in combination: a base member (10) of elastomeric material with a plurality of suction type securing devices (11) affixed to the hind side of the said base member; and a scrubber element (12) removably fitted to cover the front of the base member.
2. A back scrubber cum massager device as claimed in Claim 1 wherein the base member (10) is of non-water-absorbent material.
3. A back scrubber cum massager device as claimed in Claims 1 and 2 wherein the front of the base member is configured to provide a flat or substantially convex surface.
4. A back scrubber cum massager device as claimed in Claim 3, wherein the base member in cross-sectional view along the longitudinal central axis of the device is substantially convex.
5. A back scrubber cum massager device as claimed in Claim 1 wherein the suction type securing devices are of elastomeric suction cups (11).

6. A back scrubber cum massager device as claimed in Claim 5 wherein the lengths of the trunk of the suction cup is of discrete length, increasing in value from the sides of the base member towards the central longitudinal axis.
7. A back scrubber cum massager device as claimed in Claims 1 and 2 wherein the front (14) of the base member includes a plurality of grooves and ridges (18).
8. A back scrubber cum massager device as claimed in Claims 1 and 2 wherein the elastomeric material is ethylene vinyl acetate (EVA).
9. A back scrubber cum massager device as claimed in Claim 1 wherein the scrubber element (12) is tight fittingly and removably covered over the front surface of the base member.
10. A back scrubber cum massager device as claimed in Claim 9 wherein the scrubber element is a piece of towel, wash cloth, textile fabric or fibre or other flexible material of fairly abrasive surface texture.
11. A back scrubber cum massager device as claimed in Claim 1 wherein the scrubber element is removably attached to the base member by either by means of VELCRO strips (16) elastic bands, zips or end-pockets.

12. A back scrubber cum massager device adopted to be removably secured to a vertical surface (15) said device comprising in combination;

a base member (10) of elastomeric material with a plurality of suction type securing devices (11) affixed to the hind-side of the said base member and

a scrubber element securely fixed to cover the front of the base member.

13. A back scrubber cum massager device as claimed in Claim 12 wherein the scrubber element (20) is of non-absorbent elastomeric material and whose exposed surface is abrasive.

14. A back scrubber cum massager device as claimed in Claims 13 wherein the exposed surface of the scrubber element in cross-sectional view along the longitudinal central axis of the device is substantially convex.

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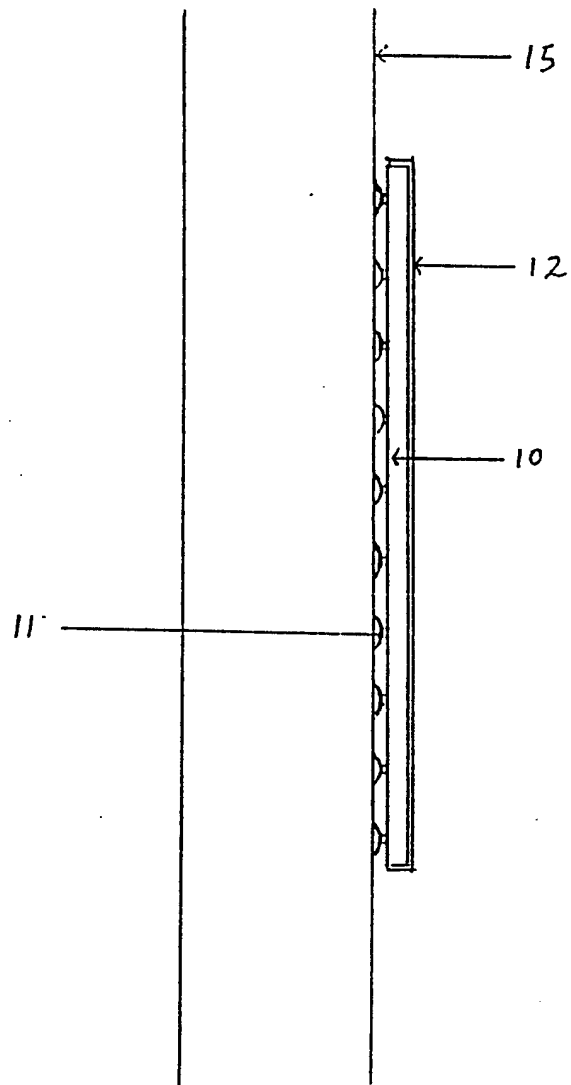


Fig 1 - Vertical Cross-Sectional View

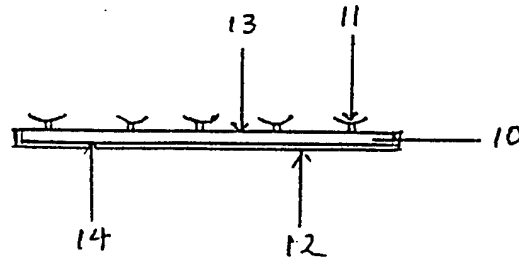


Fig 2a

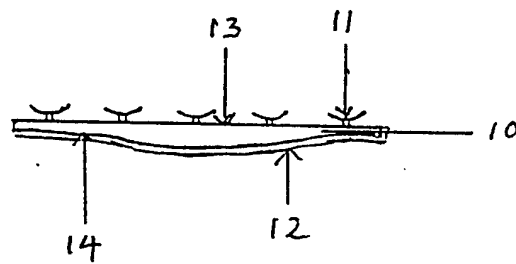


Fig 2b

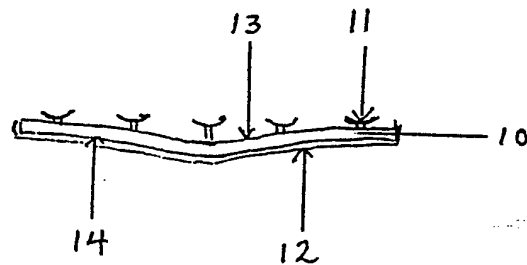


Fig 2c

Fig 7 - Horizontal Cross-Sectional View

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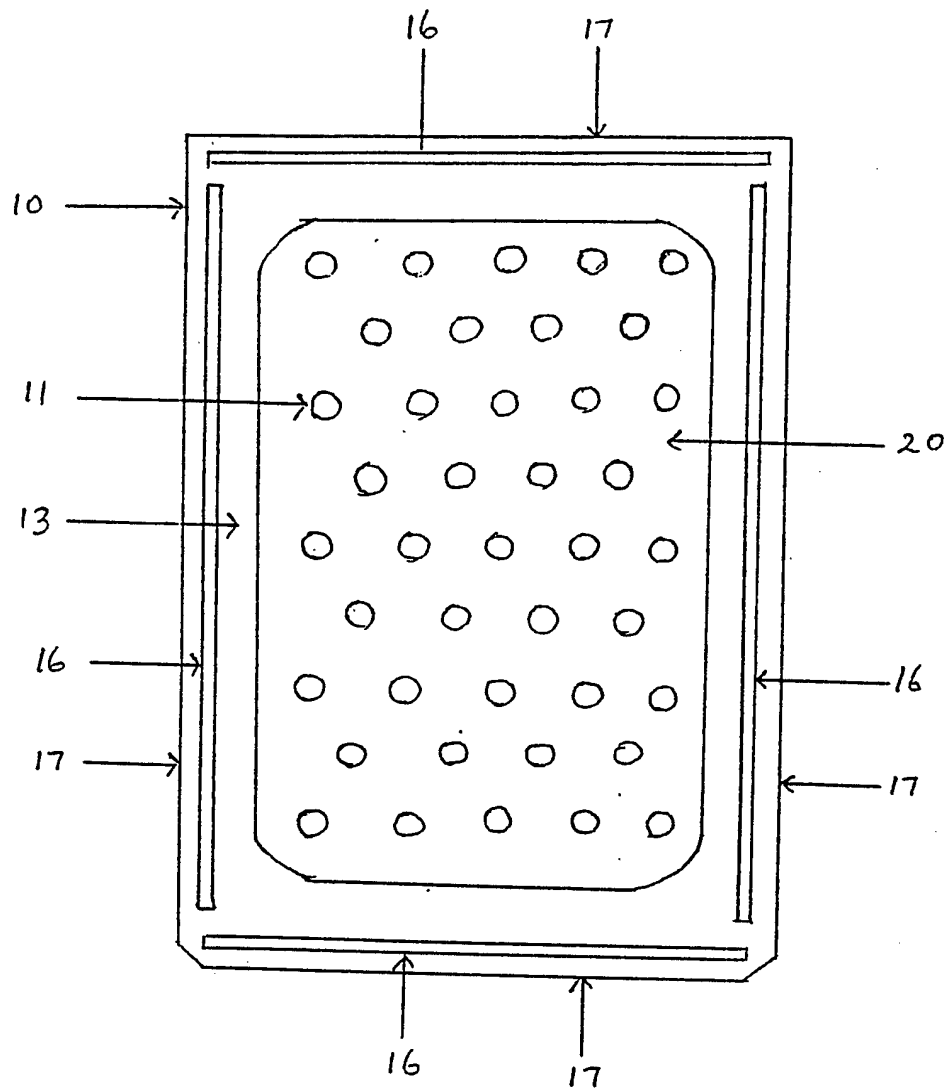


Fig 3 - Rear Plan View

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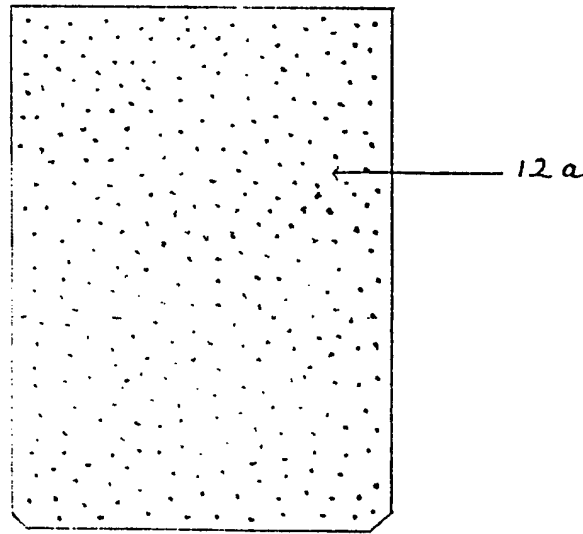


Fig 4a - Front View with Scrubber Element

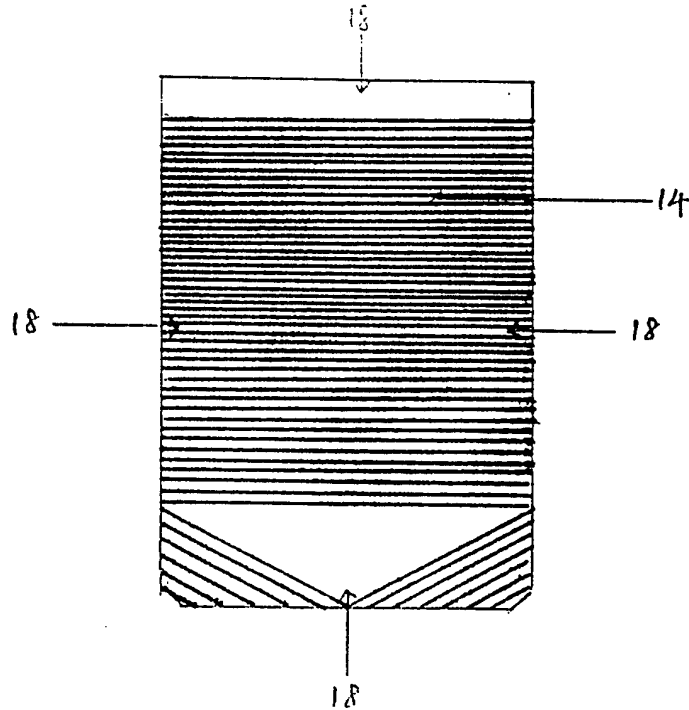


Fig 4b - Front View without Scrubber Element

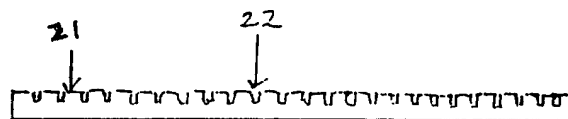


Fig 4c - Side View showing Ridges and Grooves



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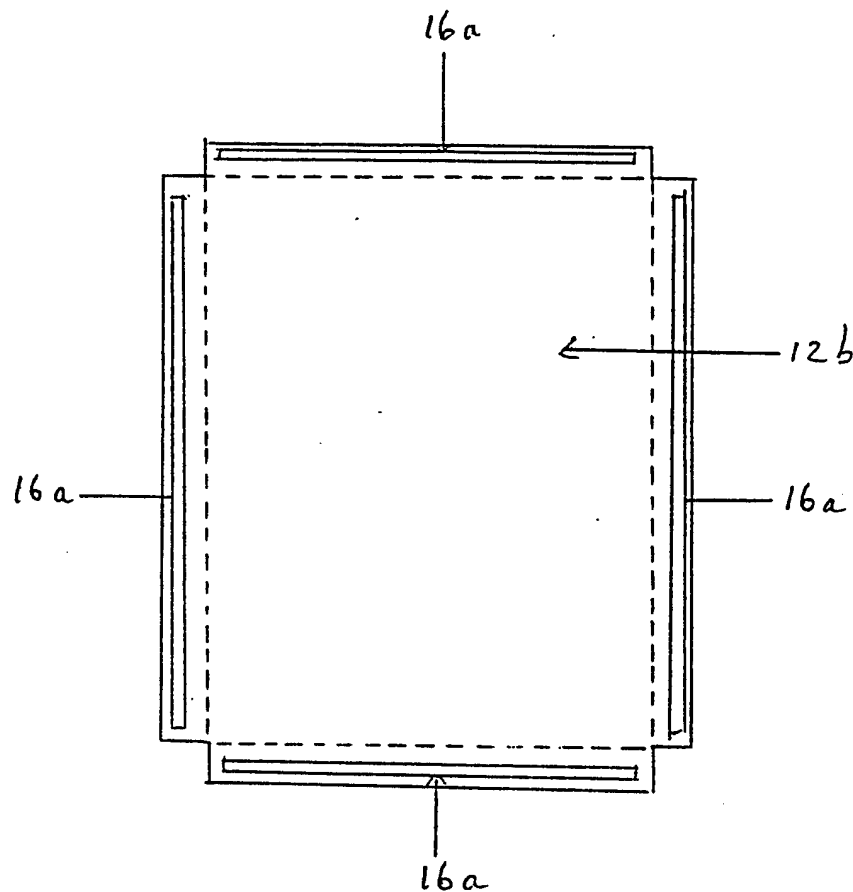


Fig 5 - Back View of Scrubber Element

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Fig 6 - Side View of Scrubber Cum Massager In Use

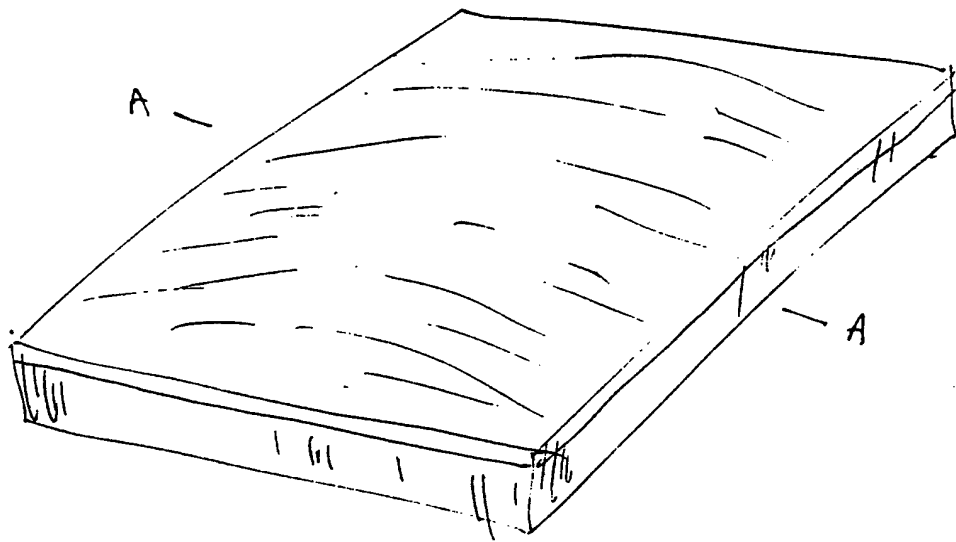


Fig. 7.

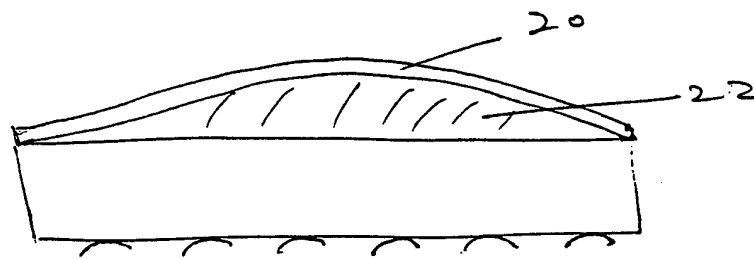


Fig 8

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SG 95/00004

|   |   |  |  |                                      |  |
|---|---|--|--|--------------------------------------|--|
| <b>A. CLASSIFICATION OF SUBJECT MATTER</b><br>Int. Cl. <sup>6</sup> A61H 7/00; A47K 7/00, 7/02; A46B 15/00, 17/02<br><br>According to International Patent Classification (IPC) or to both national classification and IPC  |   |  |  |                                      |  |
| <b>B. FIELDS SEARCHED</b><br><br>Minimum documentation searched (classification system followed by classification symbols)<br>IPC: A61H 7/00; A47K 7/00, 7/02; A46B 15/00, 17/02<br><br>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched<br>AU: IPC as above<br><br>Electronic data base consulted during the international search (name of data base, and where practicable, search terms used)<br>DERWENT  |   |  |  |                                      |  |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>   |   |  |  |                                      |  |
| <b>Category*</b>  | <b>Citation of document, with indication, where appropriate, of the relevant passages</b> | <b>Relevant to Claim No.</b>   |  |                                      |  |
| X   | US 3040337 A (FJELSTAD) 26 June 1962<br>whole document                                    | 1-6, 9, 10, 12-14  |  |                                      |  |
| X   | US 4759091 A (KISS) 26 July 1988<br>whole document  | 1, 2, 5, 8, 9, 12, 13  |  |                                      |  |
| X   | US 4696068 A (KENNER) 29 September 1987<br>whole document                                 | 1-5, 9-14  |  |                                      |  |
| X   | GB 2123281 A (LAWTON) 1 February 1984<br>whole document                                   | 1, 2, 5, 8, 9, 11-13   |  |                                      |  |
| <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.         </div> <div> <input checked="" type="checkbox"/> See patent family annex.         </div> </div>   |   |  |  |                                      |  |
| <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;">           * Special categories of cited documents :<br/>           "A" document defining the general state of the art which is not considered to be of particular relevance<br/>           "E" earlier document but published on or after the international filing date<br/>           "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)<br/>           "O" document referring to an oral disclosure, use, exhibition or other means<br/>           "P" document published prior to the international filing date but later than the priority date claimed         </td> <td style="width: 10%; vertical-align: top; text-align: center;">           "T"<br/><br/>"X"<br/><br/>"Y"<br/><br/>"&amp;"         </td> <td style="width: 40%; vertical-align: top;">           later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention<br/>           document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone<br/>           document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art<br/>           document member of the same patent family         </td> </tr> </table> |   |  | * Special categories of cited documents :<br>"A" document defining the general state of the art which is not considered to be of particular relevance<br>"E" earlier document but published on or after the international filing date<br>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)<br>"O" document referring to an oral disclosure, use, exhibition or other means<br>"P" document published prior to the international filing date but later than the priority date claimed | "T"<br><br>"X"<br><br>"Y"<br><br>"&" | later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention<br>document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone<br>document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art<br>document member of the same patent family |
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| Category*  | Citation of document, with indication, where appropriate of the relevant passages | Relevant to Claim No. |
| X  | US 5175896 A (ZAMIR) 5 January 1993<br>whole document                             | 1-14                  |
| X  | AU 42331/89 A (BADER) 11 April 1991<br>whole document                             | 1-5, 10, 12-14        |
| X  | US 4943018 A (GLASER) 24 July 1990<br>whole document                              | 1-5, 8, 12-14         |
| A  | FR 2631224 A (SODEV) 17 November 1989<br>whole document                           |                       |
| A  | CA 1295099 A (ARMSWORTHY) 4 February 1992<br>whole document                       |                       |

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent Document<br>Cited in Search<br>Report |         | Patent Family Member |         |
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| US   | 4943018 | CA                   | 2004209 |
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